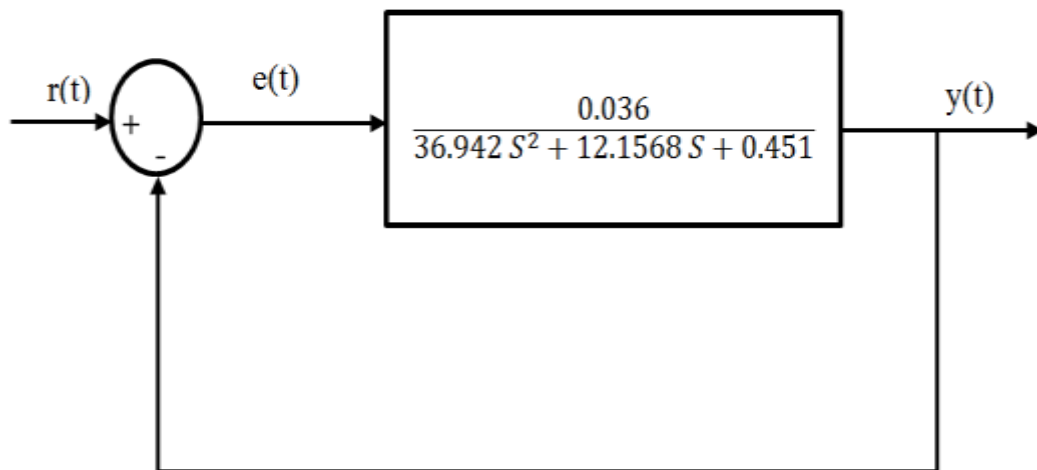


The following unity feedback control system represents the flow of liquid to a unit step input:



1. Using MATLAB program, design the following controllers to improve the response of the system (in the case of unit step input):
 - Classical PD controller
 - Fuzzy PD controller
 - Classical PID controller
 - Fuzzy PID controller
2. Compare between the response of the classical PD controller and the response of the fuzzy-PD controller.
3. Compare between the response of the classical PID controller and the response of the fuzzy-PID controller.

Note that:

The controller will be used in the forward path before the plant as shown in the following figure:

